

## Claims

1. Alkaline fuel cell comprising at least one electrolyte (1) on which is disposed anode (2) comprising at least first and second thin layers (3, 4) respectively including aluminium and zinc, cell characterized in that the first thin layer (3) consists of aluminium or of an aluminium alloy, the second thin layer (4) being disposed between the first thin layer (3) and the electrolyte (1).

2. Fuel cell according to claim 1, characterized in that the second thin layer (4) consists of zinc.

3. Fuel cell according to claim 1, characterized in that the second thin layer (4) consists of a zinc alloy.

4. Fuel cell according to any one of the claims 1 to 3, characterized in that the thickness of each thin layer (3, 4) is comprised between 10nm and 100 $\mu$ m.

5. Fuel cell according to any one of the claims 1 to 4, characterized in that the anode (2) consists of an alternation of first and second thin layers (3a, 3b and 4a, 4b).

6. Method for producing an anode of an alkaline fuel cell according to any one of the claims 1 to 5, characterized in that it consists in depositing at least one second thin layer (4) designed to come into contact with the electrolyte (1) and comprising zinc, by physical vapor deposition, on a substrate formed by a first thin layer (3) made of aluminium or an aluminium alloy.

7. Method for producing according to claim 6, characterized in that an alternation of first and second thin layers (3a, 3b and 4a, 4b) is deposited on the second thin layer (4b) by physical vapor deposition.